

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of embedding a watermark in a motion image signal, the motion image signal comprising a sequence of images, the method comprising:

representing the watermark by a sequence of watermark samples each having a ~~first or a second~~ value;

dividing an image of the ~~motion image signal~~ sequence of images into at least a first and a second image area;

~~determining a global property of the first and the second image area; and~~

~~modifying the image to increase the global property of the first area and decrease the global property of the second area for embedding the first value of a watermark sample into the image, or to decrease the global property of the first area and increase the global property of the second area for embedding the second value of the watermark sample into the image in accordance with a watermark sample from the sequence of watermark samples, the modification comprising adding the watermark sample value to the luminance value of pixels of the first image area and subtracting the watermark sample value from the luminance value of pixels of the second image area to oppositely modify the mean luminances of the first and second image areas in accordance with the watermark sample; and~~

for each of the sequence of watermark samples, repeating the dividing an image of the sequence of images and modifying of the image in accordance with a watermark sample from the sequence of watermark samples such that each watermark sample oppositely modifies the mean luminances of the first and second image areas of a different image of the sequence of images until the entire watermark is embedded.

2. (Cancelled)

3. (Previously Presented) The method of claim 1, wherein the image modifying comprises modifying a series of consecutive images in accordance with the same watermark sample.

4. (Previously Presented) The method of claim 1, wherein the first and second image areas are the upper and lower of an image halves, respectively.

5. (Previously Presented) The method of claim 1, wherein the first and second image areas are the left and right of an image halves, respectively.

6. (Currently Amended) An arrangement for embedding a watermark in a motion image signal, the motion image signal comprising a sequence of images, the arrangement comprising:

means for representing the watermark by a sequence of watermark samples each having a ~~first or a second~~ value;

means for dividing an image of the ~~motion image signal~~ sequence of images into at least a first and a second image area;

~~means for determining a global property of the first and the second image area; and~~
image modifying means being arranged ~~to increase the global property of the first image area and decrease the global property of the second image area in response to the first value of a watermark sample to be embedded into the image, or to decrease the global property of the first image area and increase the global property of the image second area in response to embedding the second value of a watermark sample to be embedded into the image~~ for modifying the image in accordance with a watermark sample from the sequence of watermark samples, the modification comprising adding the watermark sample value to the luminance value of pixels of the first image area and subtracting the watermark sample value from the luminance value of pixels of the second image area to oppositely modify the mean luminances of the first and second image areas in accordance with the watermark sample,

wherein, the modifying means is further arranged to repeat the dividing an image of the sequence of images and modifying of the image for each of the sequence of watermark samples in accordance with a watermark sample from the sequence of watermark samples such that each watermark sample oppositely modifies the mean luminances of the first and second image areas of a different image of the sequence of images until the entire watermark is embedded.

7. (Currently Amended) A method of detecting a watermark in a watermarked motion image host signal, the motion image signal comprising a sequence of images, the method comprising, for each image of the sequence of images:

dividing ~~each~~ the image of the host signal into at least a first and a second image area;

determining a ~~global-property~~ mean luminance of the first image area and a mean luminance of the second image area;

~~computing, for each of a series of images,~~ the difference between the ~~global-property~~ mean luminance of the first image area and the mean luminance of the second image area;

forming a sequence of the computed differences corresponding to the sequence of images; and

~~correlating, for the series of images,~~ the ~~respective~~ corresponding sequence of differences with the watermark to be detected.

8. (Cancelled)

9. (Currently Amended) The method of claim 7, further including:

subtracting respectively from the mean luminance of the first image area and the mean luminance of the second image area ~~series of global-properties~~ a low-pass filtered version thereof; and

wherein the computing the difference is performed using the mean luminance of the first image area and the mean luminance of the second image area having subtracted respectively the low-pass filtered version thereof, ~~and applying the correlating to the subtracted signal.~~

10. (Currently Amended) The method of claim 9, further including determining the sign of the subtracted signal, and wherein applying the correlating applies to the corresponding sequence of signs ~~sign~~.